



PATENTS ACT 1977

PARTIES	Wei Xu
ISSUE	Whether patent application GB2108138.5 complies with Section 1(2) of the Patents Act 1977
HEARING OFFICER	Ben Buchanan

DECISION

Background

- 1 This decision relates to whether patent application GB2108138.5 complies with Section 1(2) of the Patents Act 1977 (“the Act”).
- 2 The application was published as GB2593384 A. It was lodged on 8 June 2021 claiming divisional status from application GB1521949.6 / GB2530940 A, which was the national phase of a PCT application published as WO2015/003476 (in Chinese). The priority date of the application is 8 July 2013. Consequently, it is now some nine years since the earliest date, and that time period should be borne in mind when considering the invention.
- 3 In view of its divisional status a combined search and examination of the application was carried out. At that stage objections were raised, the principal objections being that the application was not inventive based on the disclosures of the Applicant’s prior application WO2012/142937 (EP2701112) and was not patentable as being nothing more than a program for a computer and/or a method for doing business. As such, it fell within the exclusion from patentability of Section 1(2)(c) of the Act.
- 4 Although the Applicant was able to amend to address the lack of inventive step objection to the satisfaction of the Examiner, the lack of patentability objection was maintained.
- 5 The Examiner suggested a hearing be requested to resolve the issue in the letter accompanying his examination report of 26 January 2022. At the time, the compliance period had been extended and was due to expire on 8 March 2022. In their letter of 21 February 2022 the Applicant requested a hearing should the Examiner find the application not to be in order. On 18 March 2022 the Examiner issued a final letter setting out the issues for consideration at a hearing and a hearing was duly arranged.

- 6 The matter came before me for a hearing on 20 May 2022 at which the Applicant was represented by Philip Sanger of Grey Wolf IP (hereafter “the Attorney”). Skeleton arguments were helpfully provided by the Attorney in advance of the hearing.
- 7 The only matter which falls to be decided is whether or not the invention is excluded under Section 1(2) as being a method for doing business and/or a program for a computer.
- 8 The hearing on this application was held at the same time as that on co-pending application GB2108139.3, but they were heard consecutively and independently. Much of the argument was repeated and applied to both applications. For this reason, much of the discussion is common in both decisions, but I have left it in each so that they stand alone.

Subject matter

- 9 The application is titled “Method and device for communication using barcode image, and wearable component with embedded sensing core engine”. This is a general reflection of the original application and does not specifically identify the present inventive concept. It relates to a system comprising one or more barcodes which are scanned by and/or displayed on one or more mobile terminals, the mobile terminals being in communication with one or more backend servers. The embodiments of the application disclose uses of such a system for enhancing or streamlining certain types of business transaction. In most cases the mobile terminal is a smart phone, but it could also be a smart watch or other smart wearable.
- 10 The application extends to 50 or so pages and discusses a number of discrete embodiments to the extent that the current application is one of nine divisionals based on the original parent application. I will necessarily focus on the embodiment most relevant to the present claims in order to describe and elucidate the invention.
- 11 The invention of this application is directed to a system comprising first and second mobile terminals, first and second barcode images and a backend server. It is best understood by reference to the particular embodiment which the claims of this application are understood to relate to. In essence the embodiment discloses an ordering system for a restaurant in which the diner scans a barcode with a mobile phone to access an online menu. (Such systems are familiar nowadays but would arguably have been less commonplace at the priority date of the invention). The diner places their order via the menu on the phone and the order information is communicated to the waiter’s mobile phone. The system also sends a discount coupon barcode to the diner’s phone which is scanned and verified by the waiter’s phone. Page 32, line 8 to page 33, line 8 describes the embodiment as follows:

Another embodiment of the present invention can be applied in the ordering process of restaurant. When consumer enters the restaurant, since the waiter is busy and so as to ask the consumer to scan the two-dimensional code 6 on the table, and this two-dimensional code contains the information of backend server 41.

1) The consumer opens camera 22 in mobile phone to take a picture of

two-dimensional code 6, obtains the address and relevant parameters of backend server 41 through the decoder 23 and coding information parsing unit 416 built in mobile phone hardware entity, thus connecting to backend server.

2) Determine whether the mobile phone has installed the decoding client software corresponding to coding rule of two-dimensional code 6; if not installed, download and install decoding client software, and introduce the parsed parameters contained in two-dimensional code into automatically started client software; if installed, directly introduce the parsed parameters contained in two-dimensional code into automatically started client software;

3) Client software starts and displays the menu of the restaurant, and the menu is read and displayed according to coding rule of two-dimensional code. Comments on each dish in the menu can be viewed. Preferably, the comments are posted after the client software in consumer mobile phone scans two-dimensional code of the restaurant menu, in line with location based service (LBS). Moreover, the comments can be connected to the mobile phone, thus avoiding lots of invalid comments.

4) Order the satisfied dishes on the menu, the consumer mobile phone client software generates order information, and the client software or SMS on mobile phone of the waiter connected to two-dimensional code 6 receives the order information, including the dishes, table number, time, etc. Preferably, the menu may also include the link to obtain discount coupon, after clicking the link, it will send two-dimensional code containing discount coupon information to the consumer mobile phone. The mobile phone client software of waiter scans and verifies two-dimensional code containing discount coupon information in consumer mobile phone, and the consumer can use this discount coupon.

The law

- 12 The Examiner raised an objection under Section 1(2) of the Act that the invention is not patentable because it relates to one or more categories of excluded matter. The relevant provisions of this section of the Act are shown below:

1(2) It is hereby declared that the following (among other things) are not inventions for the purposes of this Act, that is to say, anything which consists of

...

(c) a scheme, rule, or method for performing a mental act, playing a game or doing business, or a program for a computer;

...

but the foregoing provision shall prevent anything from being treated as an invention for the purposes of this Act only to the extent that a patent or application for a patent relates to that thing as such.

- 13 The assessment of patentability under Section 1(2) is governed by the judgment of the Court of Appeal in *Aerotel*¹, as further interpreted by the Court of Appeal in *Symbian*².

¹ *Aerotel Ltd v Telco Holdings Ltd & Ors* Rev 1 [2007] RPC 7

² *Symbian Ltd v Comptroller General of Patents* [2009] RPC 1

In *Aerotel* the court reviewed the case law on the interpretation of Section 1(2) and set out a four-step test to decide whether a claimed invention is patentable:

- (1) Properly construe the claim;*
- (2) identify the actual contribution;*
- (3) ask whether it falls solely within the excluded subject matter;*
- (4) check whether the actual or alleged contribution is actually technical in nature.*

14 The Court of Appeal in *Symbian* made it clear that the four-step test in *Aerotel* was not intended to be a new departure in domestic law; it was confirmed that the test is consistent with the previous requirement set out in case law that the invention must provide a “technical contribution”. Paragraph 46 of *Aerotel* states that applying the fourth step of the test may not be necessary because the third step should have covered the question of whether the contribution is technical in nature. It was further confirmed in *Symbian* that the question of whether the invention makes a technical contribution can take place at step 3 or 4.

15 Lewison J (as he then was) in *AT&T/CVON*³ set out five signposts that he considered to be helpful when considering whether a computer program makes a technical contribution. In *HTC/Apple*⁴ the signposts were reformulated slightly in light of the decision in *Gemstar*⁵. The signposts are:

i) whether the claimed technical effect has a technical effect on a process which is carried on outside the computer

ii) whether the claimed technical effect operates at the level of the architecture of the computer; that is to say whether the effect is produced irrespective of the data being processed or the applications being run

iii) whether the claimed technical effect results in the computer being made to operate in a new way

iv) whether the program makes the computer a better computer in the sense of running more efficiently and effectively as a computer

v) whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.

Assumptions

16 I explained to the Attorney that having reviewed the file I considered that the search and assessment of novelty and inventive step appeared to be complete. Although previously other objections had been raised, for example to added subject matter, these all appeared to have been overcome. I was thus proceeding on the basis that the claims were unitary and supported and would not reconsider these issues in hearing the argument and assessing the claims. We agreed at the hearing that only

³ *AT&T Knowledge Ventures/CVON Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat)

⁴ *HTC v Apple* [2013] EWCA Civ 451

⁵ *Gemstar-TV Guide International Inc v Virgin Media Ltd* [2010] RPC 10

claim 1 would be considered and that the remaining claims would stand or fall with claim 1.

Application of the Aerotel approach

Step (1): Properly construe the claim

17 The latest claims are the amended claims filed on 21 February 2022. Claim 1 is the only independent claim which reads as follows:

1. *A purchase and payment system, comprising:*

a first mobile terminal;

a second mobile terminal; and,

a backend server;

wherein:

the first and second mobile terminals and the backend server are connected via a wireless network;

a first barcode image is provided, the first barcode image comprising coding information corresponding to commodity information, and the first barcode image being associated with the second mobile terminal and the backend server;

the first mobile terminal is configured for:

acquiring the first barcode image;

decoding the first barcode image to obtain the coding information;

parsing the coding information and extracting the commodity information;

connecting to the backend server; and,

sending a service request to a backend server associated with the first barcode image;

the backend server is configured for:

receiving the service request sent from the first mobile terminal;

*responding to the service request; and,
providing a service to the first mobile terminal, the service corresponding to the service request;*

sending a second barcode image to the first mobile terminal, the second barcode image associated with the service; and,

the second mobile terminal is configured to:

receive the service request from the backend server; and,

identify and verify the second barcode image.

- 18 There are a number of terms in the claim which were clarified at the hearing with specific reference to the restaurant embodiment as follows:

connected via a wireless network – essentially wirelessly rather than via a single wireless network - maybe WiFi or mobile data connection;

a first barcode image *is provided* – the first barcode image is generated by the restaurant and would typically be made available for scanning at or on the table at the restaurant; “barcode” is used to refer to a readable code which may be a two dimensional barcode, sometimes known as a “QR code”;

commodity information – information which allows the diner to access the menu. It may not be the menu itself but would lead the customer to the menu;

the first barcode image being associated with the second mobile terminal – the first barcode image includes details of the second mobile terminal. For example, it may be that certain tables in a restaurant are allocated to a particular waiter, and the first barcode would have details to provide association with that waiter’s mobile terminal;

sending a service request (from the first mobile terminal) – placing an order;

providing a service to the first mobile terminal – executing the order;

receive the service request (at the second mobile terminal) – receive order details to enable the waiter to serve the customer;

identify and verify the second barcode image – check barcode is genuine.

- 19 Despite spending quite some time querying the Attorney at the hearing and confirming the intended scope of the individual features of the claim, I have to confess to still being a little in the dark as regards some steps of their interoperation. I think this uncertainty arises from the fact that the claims and the description, and the claimed inventions and the embodiments do not clearly and unambiguously correspond (hence my statement of assumptions above). For example, in the claim the first mobile terminal decodes and parses the first barcode to extract commodity information. *How* does it then (determine how to) connect to the backend server? The claim is silent. The claim is also silent altogether regarding the retrieval and display of the menu. According to the Attorney these steps are included within the sending of the service request.

- 20 At the hearing the Attorney asserted that the commodity information comprises “information enabling a service request”. The passages of the description repeated

above confirm that the commodity information includes the address of a server. Presumably then the commodity information includes both the server address and the menu information? Neither the claim nor the description explicitly state that the mobile terminal contacts the server to request the menu information, but I have to say that – to me at least – is implied by the description. References in the description to “comments” in respect of this embodiment are unresolved. Unfortunately, the language of the description is not definitive in these and in some other respects. It is a useful guide as to what is happening, but I do find it limited as regards assisting my construction of the claim. In summary I am inclined to accept the Attorney’s construction, with the caveat that I have not assessed whether it is supported and enabled by the description. Fortunately, I am confident this will not affect my assessment under S1(2) as the identification of the contribution is more forthcoming. With those clarifications and caveats in mind the claim is considered straightforward to construe.

21 The Examiner and Attorney agree that the claim may be summarised as:

A purchase and payment system in which:

a customer terminal scans a barcode image,

the customer terminal sends a service request to a server;

the server provides the service,

the server sends a second barcode image to the customer terminal (discount coupon),

a second mobile terminal (waiter) receives service information from the server,

the second mobile terminal then scans the second barcode from the first mobile [customer] terminal (to apply a discount).

Step (2): Identify the alleged contribution

22 The process of identifying the contribution was summarised in paragraph 43 of *Aerotel/Macrossan* as follows:

... it is an exercise in judgement probably involving the problem said to be solved, how the invention works, what its advantages are. What has the inventor really added to human knowledge perhaps best sums up the exercise. The formulation involves looking at substance not form – which is surely what the legislator intended.

23 In assessing the contribution, it is helpful to consider the state of the art. In this case the closest prior art is the Applicant’s own prior application WO2012/142937 (D1) referred to above as it formed the basis of an earlier inventive step objection. This document is in Chinese but there is an equivalent European regional phase application published in English as EP2701112 A1 (D1-EP). Although D1-EP was published after the priority date of the current application, it corresponds with the content of D1.

24 The Attorney referred to figure 10 of D1-EP (reproduced below) which illustrates a transaction system making use of a single barcode and a single mobile terminal as well as backend server and a payment server. The single mobile terminal decodes the barcode and parses it to extract commodity information (S920, S925, S930). The mobile terminal then sends a purchase request to the backend server (S935) which creates the order (S940) and requests payment from the payment server (S945).

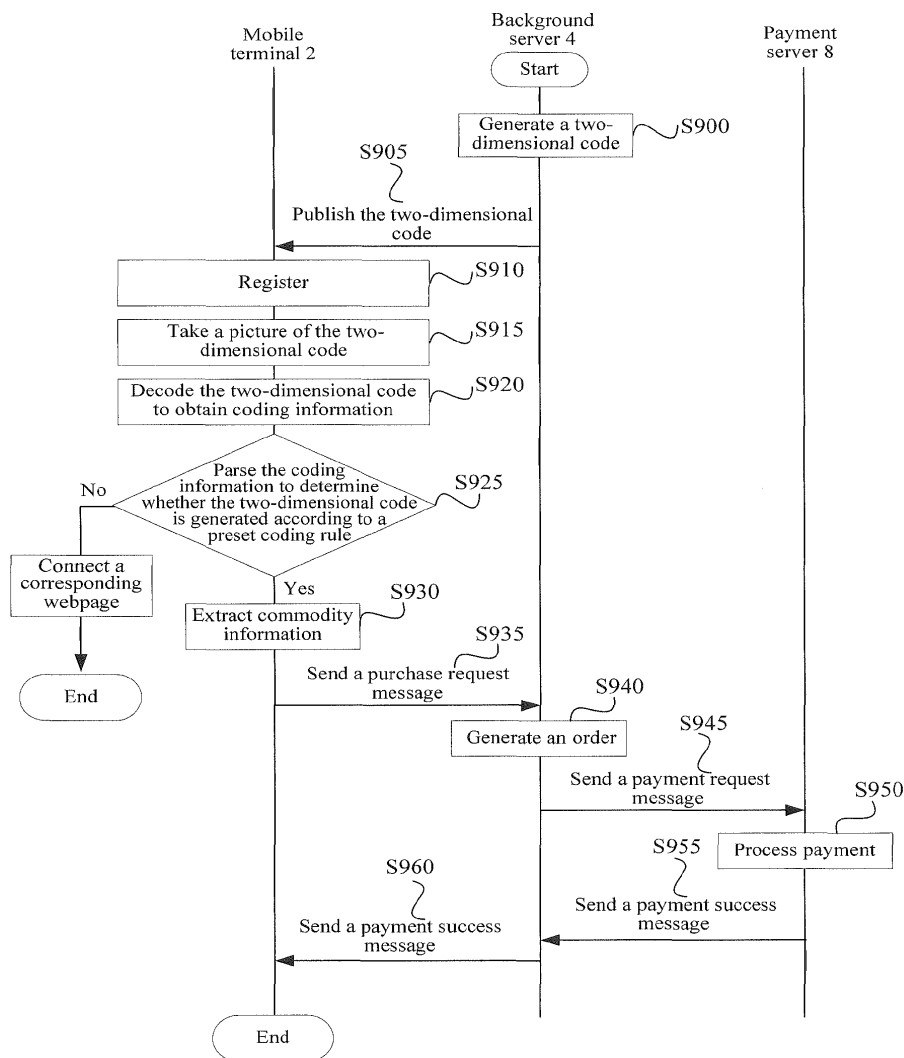


FIG. 10

25 As pointed out by the Attorney, the difference between this prior art and the current invention is the presence of the second mobile terminal, the second barcode and how the mobile terminals interact. More specifically, in relation to the summarised form of the claim above, the Attorney identified that D1 does not disclose that:

“the server sends a second barcode image to the customer terminal (discount coupon), a second mobile terminal (waiter) receives service information from the server, the second mobile terminal then scans the second barcode from the first mobile terminal (to apply a discount).”

26 Assessing the contribution involves more than just identifying the differences⁶ and it is also helpful to consider the problem that the invention solves.

27 In the skeleton arguments the Attorney summarised this as follows:

“With respect to the example discussed on pages 32 and 33, the operator of mobile terminal 2 (MT2)(the waiter) is too busy to serve the operator of mobile terminal 1 (MT1)(customer). A problem with this system is that the waiter then has no information regarding the order placed. The lack of interaction between the waiter and the customer also causes problems when handling, e.g. discount coupons issued by the business. The customer, having ordered through the MT1 has no way of applying such coupons.

The present invention ensures that the order information is sent to the MT2, such that the waiter has information about the order. Further, the coupon is issued to MT1 from the backend server as a barcode. When the customer wishes to use the coupon, the barcode can be presented for the waiter (MT2) to scan and verify.

In summary, the present invention overcomes the technical problems exhibited by the use of barcode-driven ordering systems.”

28 Note that further references to the skeleton arguments, reiterated at the hearing, appear below and use similar terminology (MT1, MT2).

29 Ultimately the Attorney agreed with Examiner’s assessment of the contribution as:

A purchase and payment system in which a first terminal (customer) scans a barcode, orders a service from a server; the server provides the service, communicates service information to a second terminal (waiter), the server provides a barcode (discount coupon) to the first terminal which the second terminal (waiter) scans (and so applies for example a discount).

30 I agree that this represents the contribution.

Steps (3) & (4): Does the contribution fall solely within the excluded subject matter; check if the contribution is actually technical.

31 The third and fourth steps of the *Aerotel* test involve considering whether the contribution falls solely within excluded categories, and then checking whether the contribution is technical in nature. It is appropriate to consider these two steps together because whether the contribution is technical in nature will have a direct impact on whether it falls solely within excluded matter.

32 The contribution is clearly implemented through the use of one or more computer programs. However, the fact that the invention is effected in software does not mean that it should immediately be excluded as a computer program as such. In *Symbian*, the Court of Appeal stated that a computer program may not be excluded if it makes a technical contribution.

⁶ Manual of Patent Practice at section 1.21

- 33 The Attorney argued in the first instance that the system operates in a new way, that although the individual components of the system (the backend server and mobile terminals) are conventional in isolation, the system as a whole is not, and that the prior art does not disclose components interacting in this way. He stated that the claim is accordingly directed to a novel computing system and not to a computer program or a business method as such.
- 34 Let us consider this argument. The suggestion appears to be that because the invention is novel and because it comprises a technical system, then it is not a computer program as such. However, it is not enough that the system is new only because it operates in a new way. If the new way of operating is solely by virtue of a computer program, then, absent anything technical in the contribution, the exclusion will apply. I consider that the physical arrangement of the hardware is conventional, even if the specific layout is novel, as the devices defined in the claim join and interact with the wireless network in a conventional manner. In other words, the network technology interconnecting known devices is not new. In order to decide that the invention is patentable a technical contribution must be identified.
- 35 For example, prior art D1 shows a mobile terminal communicating with a backend server which in turn communicates with a payment server. It would be entirely conventional for a second mobile terminal to simultaneously connect with the backend server. The difference provided by the present invention lies solely in how the mobile terminals interact with the backend server under the control of a computer program. It is significant that the present invention does not specify that the mobile terminals communicate with each other, in the sense that there is no direct network connection between them. The only direct interaction between the two mobile terminals is the scanning by one of a barcode displayed by the other. The novel operation then, of a conventional physical arrangement under the control of computer program, is not necessarily indicative of a technical effect.
- 36 In order to determine if the contribution is technical in nature, I will consider the *AT&T* signposts as argued by the Attorney at the hearing.
- 37 The Attorney has presented no argument in the case of signposts (ii), (iii), or (iv); the so-called *better computer* signposts. I agree that these signposts are not relevant in determining whether or not there is a technical contribution. I consider it self-evident that there is no change at the architectural level of the system or any of its components and the system is not made to *generally* operate in a new way⁷. Nor is it more efficient or effective as a computer.

First signpost – whether the claimed technical effect has a technical effect on a process which is carried on outside the computer

- 38 In paragraphs 30-31 of the High Court's judgment in *Lantana*⁸ (upheld on appeal) the judge set out that, for the purposes of this signpost, *the computer* is the system in which the invention operates as a whole and not each individual machine. The

⁷ As Lewison J effectively noted in paragraph 31 of *AT&T* this signpost "points towards some generally applicable method of operating a computer rather than a way of handling particular types of information".

⁸ *Lantana v Comptroller-General of Patents* [2013] EWHC 2673 (Pat)

Attorney argued that this was simply meant to stop applicants splitting up a single computer into multiple computers and claiming an effect outside any one of those multiple computers. I do not agree that the judgment is limited in this way. I consider that it applies whenever two or more computing devices are connected via a network, subject to any cogent arguments relating to the independence of any of those devices. I consider that the arrangement of mobile terminals and server(s) of the current application, connected in a conventional network topology, represents a computer for the purpose of this signpost. A technical effect outside this computer may indicate that the invention does not fall within the computer program exclusion.

- 39 However, on the face of it, any benefits of the invention outside the computer lie in a similarly excluded field, namely the field of business. They relate to things such as being unable to attend a particular customer at a particular time, and to associating a promotional barcode with a specific service order. As such they are not *technical effects*.
- 40 The Attorney in his argument referred firstly to the following passage of the decision of the Court of Appeal in *Lantana*:

*“The first signpost did not help because the technical effect of communication was achieved within “the computing arrangement” consisting of the two computers and the network by which they communicated. **The mode that the computers used to communicate with each other was entirely conventional and could not be part of a technical contribution**”*

- 41 The emphasis in the final sentence is the Attorney’s. He argued that *Lantana* was refused because it was concerned with known computers connected by a known network operating in a known manner. In contrast he claimed that the arrangement of the components of the present invention and the manner in which they interact is new.
- 42 The invention in *Lantana* related to a method for transferring files between two computers by means of email which avoided the need for the computers to both be on at the same time. A local computer was provided with a list of files on a remote computer and upon selection of one of those files an email was sent to the remote computer requesting that file. When the remote computer received that email (at a time it was on), then it would email the requested file back to the local computer.
- 43 The Attorney’s argument seems to mischaracterise the decision in *Lantana*. In particular, one of the arguments raised by *Lantana* on appeal was that the invention must provide a technical contribution since the judge had determined that it was novel and inventive. The Court of Appeal stated:

In substance the claim relates to computer software running on conventional computers connected by a conventional network. The task the software performs moves data from one computer to another using a conventional technique for carrying out the task, i.e. email. The context in which this arises is that accessing remote computers via continuous connections can be problematic but this is not a technical solution to those problems, it avoids them, but does so using a conventional technique. The claim has been found to be novel and inventive by the examiner and in that sense it makes a contribution of some kind to the art, but the applicant has been unable to identify anything which this claim can fairly

be said to contribute which has a technical character. In my judgement this claim is to unpatentable subject matter and is contrary to s.1(2) of the Act.

- 44 There was clearly something novel in the interaction between the computers in *Lantana* given that it was found to be novel and inventive. Although the use of email is specifically identified as a conventional technique, the same, it seems, must apply to the conventional network communication between the components of the present invention. I agree with the Attorney that there is a new interaction between the components, but there was also a new interaction between the computers of *Lantana*. The decisive point in *Lantana* is that there was no technical effect in that interaction - no *technical* contribution. The same is true here.
- 45 Although the Attorney referred to the components interacting in a new and technical manner, this seems to have been based on the “technical” nature of the components as hardware devices. He has not pointed to any changes to the technical specification, capabilities or hence any technical contribution. For this reason, I disagree that the *manner* of interaction is new; it is not, it is technically conventional, even if the data communicated and the program controlling it is novel and defines the invention.
- 46 The Attorney made a similar case in respect of the original Court of Appeal decision in *Aerotel* and referred to the following passage from the summary of the decision:

H27 (15) When considering the method claim, claim 1, the judge had misunderstood Aerotel’s evidence and thereby misassessed the contribution of the inventor. The inventor was not saying “use existing apparatus for my new method”, instead he was saying “create a new overall combination of apparatus using known types of apparatus and use that combination for my method”. The appeal would be allowed. ([56],[57],[77]).

- 47 The Attorney claimed that the current invention is a similar new arrangement of known components to form a novel system. As acknowledged above, while the specific layout may be new, that alone does not indicate a technical contribution. I consider that the components are interconnected in a network arrangement which uses conventional connections, communications and protocols. It is a conventional arrangement. Novelty is conferred by the software running on the different components which provides for new forms of procedural interaction between the components but does not indicate a technical effect.
- 48 The Attorney also referred to a couple of recent Office decisions, *Lookout*⁹ and *Google*¹⁰. From *Lookout*, he referred to the following statement made by the Hearing Officer (at paragraph 36):

It is important to define what is meant by “the computer” in respect of this signpost. As the examiner points out in their report of 17 June, in Lantana, the Court directed that the “computer” may be a system of computers; a network computer. In so far as the user client computer, the network resource server and the authorisation server are concerned, I agree. Those devices are connected together to control and enable access to the requested resource. The authorising

⁹ *Lookout Inc.’s Application* BL O/701/21

¹⁰ *Google LLC’s Application* BL O/611/19

device is separate; deliberately independent even. I am not inclined to consider it as unitary with the “network computer”. The process of interaction between the computer and the authorising device would therefore be outside the computer and the resultant effect is one of verification and authorisation to access the network resource. I regard access-control / security as a technical field of endeavour and on that basis would regard the effect of the contribution to mean that the first signpost is met.

- 49 The Attorney based his argument on the premise that “*The Hearing Officer, correctly, identified the field of access control / security as a technical field because it occurs outside the computer*”. This premise is however subtly incorrect. *Lookout’s* application was allowed because the access control feature was *both* outside the computer *and also* technical in character (in relating to access control / security).
- 50 He went on to make the case that “*the requirement to send the service request to the MT2, and to scan the code from MT1 with MT2 both relate to activities outside the system – specifically informing the user of MT2 (the waiter) that the order has been processed, and scanning a coupon (which happens during user interaction)*”. The Attorney made particular reference to the scanning of barcodes being outside the computer. Although these activities may be considered to lie beyond the computer system, I do not consider them to be inherently technical in nature, and as above they are not technical simply because they occur outside the computer. There is no suggestion that they are improved per se, for example offering an improved means of *verifying* or *authenticating* a scanned code. Rather, they are characterised by the encoded data. These activities are considered to relate to business administration and to financial transactions respectively; they are conventional tools within the field. As such they are not technical in character because they relate to another excluded field: a method for doing business.
- 51 The Attorney also appears to have been trying to draw an analogy between the independent mobile device of *Lookout* and the mobile terminals of the instant application and suggested that they are not part of the computer such that any interaction between them is outside the computer. I do not agree with this analogy. I consider that it is the specific manner of the interaction between the mobile device and the computer of *Lookout* which gives the mobile device its independent quality so that it is considered to be outside the computer. The configuration of the system in *Lookout* was such that the device in question was employed to authorise access and was deliberately independent of the authorised user, which enabled access control to be improved. The independence of the device gave rise to the effect outside the computer, and the contribution to access control lent technical character to the effect. I do not believe *Lookout* was intending to suggest that mobile terminals always fell outside the computer.
- 52 The Attorney referred to *Lenovo*¹¹ as an example of a judgment where an invention in the field of commerce was found not to be excluded. However, in that case it was the removal of a physical action (the necessity to manually select on a display the card that was to be used for payment) that was considered to be a technical effect. He has

¹¹ *Lenovo (Singapore) PTE Ltd v Comptroller General of Patents* [2020] EWHC 1706 (Pat)

not identified a similar removal of a physical action in the current application. I cannot see any similar technical effect and *Lenovo* does not assist the Applicant.

53 In relation to *Google* the Attorney stated “*Clearly, the arrangement of the computing devices and their respective functions has a bearing on the contribution. To put it another way, although the individual computing devices are known, if their arrangement and functions contributes to the technical effect of the invention then this must be recognised.*” I do not think there is any doubt that this is an accurate reflection of the law. However, he has not convinced me that it applies to the current invention. As set out above, I have not been persuaded that the devices and their functions confer technicality upon the contribution. I cannot see any relevant technical effect in the contribution identified above and hence the bearing of the devices on that contribution is not influential.

54 In summary, whilst I consider that there are effects outside the computer, in particular the provision and scanning of barcodes, whether published on paper or electronically, these effects are not technical in nature. These effects are business method improvements such that they lie in a similarly excluded field and cannot confer technicality on the invention.

Fifth signpost - whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented

55 This signpost is intended to consider whether there are any technical problems that have been overcome rather than circumvented. Overcoming a technical problem may indicate a technical effect¹².

56 The Attorney has not specifically set out what the perceived problem is and has merely claimed that the invention involves a direct solution to the problem rather than a circumvention of it. He explained that problems arise when using barcodes to order food and postulated that when faced with technical problems, the solution must itself be technical.

57 In the discussion of the contribution, he identified the following problems with the prior art:

“A problem with this system is that the waiter then has no information regarding the order placed. The lack of interaction between the waiter and the customer also causes problems when handling e.g. discount coupons issued by the business. The customer, having ordered through the MT1 has no way of applying such coupons.”

58 I consider that these problems have been overcome by the invention, but that they are not technical problems. They are business problems and the solutions to these problems do not possess any technical character.

59 At the hearing the Attorney suggested that although the invention is in the retail field, the problems were nevertheless technical because they related to the interaction of

¹² See EPO Technical Board of Appeal Decision T0258/03 (Auction method/Hitachi) on which signpost (v) is based.

computers in the form of servers and mobile terminals, and related problems are necessarily technical.

- 60 I disagree with this argument and the warning of Birss J at paragraph 35 of *Halliburton*¹³ seems apt:

The business method cases can be tricky to analyse by just asking whether the invention has a technical effect or makes a technical contribution. The reason is that computer as self-evidently technical in nature. Thus when a business method is implemented on a computer, the patentee has a rich vein of arguments to deploy in seeking to contend that his invention gives rise to a technical effect or makes a technical contribution... That means that some apparently technical effects do not always count. So a computer programmed to be a better computer is patentable (Symbian) but as Fox LJ pointed out in relation to the business method exclusion in Merrill Lynch, the fact that the method of doing business may be an improvement on previous methods is immaterial because the business method exclusion is generic.

- 61 The problems solved by this invention are business problems albeit the solution is implemented on a computer. The fact that it is implemented on a computer is not itself sufficient to provide a technical contribution.
- 62 The Attorney also argued that the present application could be distinguished from the decision in *Merrill Lynch*¹⁴ on the basis that *Merrill Lynch* was refused as being nothing more than the automation of an existing business concept. He made the point that the current invention is not simply automating an existing system, but it is specifically concerned with improving the functioning and customer/waiter interaction of an ordering system implemented on a computer. The invention is said to solve problems encountered with such an implementation.
- 63 In terms of the decision in *Merrill Lynch*, I do not see that the narrow basis on which that case was decided helps the Applicant in this case. Whilst the current invention is not simply automation of an existing concept, the system is nevertheless considered to be an improved method for doing business implemented on a computer. Similarly, the problems are considered to be business problems and not technical.
- 64 Considering the identified contribution as a whole, the Attorney suggested that the technical effect was the provision of an additional mobile terminal and the interaction between the devices. As previously discussed, the devices are considered to be arranged conventionally such that they form a computer for the purposes of assessing the first signpost. Although the specific interaction is new, the signposts do not suggest any technical effect, nor can I see anything irrespective of the signposts which would be considered a technical effect. The invention provides improved interaction between customers and waiters via their respective devices. Although this is an effect outside the computer it is not a relevant technical effect as it lies in the business method field.

¹³ *Halliburton Energy Services inc. v Comptroller General of Patents* [2011] EWHC 2508

¹⁴ *Merrill Lynch's Application* [1989] RPC 561

65 Since I can find no technical effect in the contribution of claim 1, the invention is considered to be nothing more than a method for doing business and a program for a computer as such. Accordingly, it falls within the exclusions of Section 1(2)(c) of the Act and is excluded from patentability.

Conclusion

66 Since the invention fails to comply with Section 1(2)(c) of the Act because it is a business method and a computer program as such, the application is refused under Section 18 of the Act.

Appeal

67 Any appeal must be lodged within 28 days after the date of this decision.

Deputy Director, acting for the Comptroller